

# **MTT 493: Independent Research II In Mathematics Education**

## **I. Basic Course Information**

Independent research, MTT 493, is an upper level course in which students engage in research experiences on advanced mathematics education topics that constitute new research for the student. Students work in collaboration with a faculty member and/or with fellow student researchers and a faculty mentor. The student will be expected at the end of the semester to write a paper which will be presented to the department or at a mathematics education conference. To register for the course a student must make arrangements with a faculty member of the department who agrees to serve as a mentor of the independent research. Students must have completed MTT 393 with at least a B to register for the course.

The faculty mentor and the student will write a proposal explaining the subject matter that will be studied as well as the way the student's work will be assessed. An independent research contract/enrollment form must be prepared by the student, approved by the faculty mentor and the department chairperson, and submitted to the Office of Records and Registration at the time the student registers for the course. Registration for independent research will be accepted only through the first week of the semester.

## **II. Learning Goals**

1. A deep understanding of some selected topics in mathematics education.
2. To enhance a student's ability to solve difficult problems in a certain area in mathematics education.
3. To improve a student's ability to read and write articles on mathematics education research.
4. To improve a student's ability to conduct literature searches in the discipline.
5. To improve a student's ability to communicate orally their results.

## **III. Student Assessment**

Students will meet with their faculty mentor on a weekly basis. They will be assessed, by the faculty mentor, based on their weekly progress. At the end of the semester students must submit their results in a paper that they will present to the department or at a mathematics education conference.

## **IV. Learning Activities**

The learning activities will be decided by the faculty mentor. They will be specified in the original proposal submitted to the department chairperson for approval.